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ABSTRACT

The International Seminar on Functional Illiteracy and Professional Incompetence as Risk Factors of Modern Civilization and the Role of Adult Continuing Education in Overcoming Them examined the modern problem and definition of illiteracy, the causes of professional illiteracy, measures to eliminate the causes, and recommendations for further research. The first two papers in the seminar, given by an agricultural economist and a sociologist, challenged the participants to move beyond the traditional boundaries of thinking about literacy and adult education in their deliberations. They noted that illiteracy results not so much from the fact that people do not learn, but that the world changes around them and new knowledge must be mastered and new ideas accepted. Subsequent papers touched on these major themes: (1) goals for literacy need to broadened; (2) education should move from a monofunctional to a polyfunctional model; (3) people function in various spheres and can be literate in some but not others; and (4) illiteracy occurs at higher levels of cognitive achievement than have been traditionally considered--thus the term "professional incompetence." The ideas discussed at the seminar could be combined into a model for further research in literacy and professional competence. The model would appear as a continuum ranging from functional literacy to professional competence, with people moving up or down on the continuum depending on the changes in society or their professions and their access to continuing education. An agenda for research can be based on the model. (KC)

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RESEARCH MODEL EMERGES FROM INTERNATIONAL CONFERENCE

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The International Seminar on
FUNCTIONAL ILLITERACY AND PROFESSIONAL INCOMPETENCE AS RISK FACTORS OF MODERN CIVILIZATION AND THE ROLE OF ADULT CONTINUING EDUCATION IN OVERCOMING THEM
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RESEARCH MODEL EMERGES FROM INTERNATIONAL CONFERENCE

Margaret A. Charters Ph.D. and Alexander Charters Ph.D.

The International Seminar on "Functional Illiteracy and Professional Incompetence as Risk Factors of Modern Civilization and the Role of Adult Continuing Education in Overcoming Them," met in Leningrad USSR from June 25-29th, 1990 at the Research Institute of Adult Continuing Education of the USSR Academy of Pedagogical Sciences. Members of the seminar came from a majority of the states of the USSR and from Belgium, China, Finland, West Germany(FRG), Great Britain, Israel, Korea, Mali, the United States and UNESCO. Although the majority of participants came from the Soviet Union, the pervasiveness of the terms "international" and particularly "global" gave a broad vision to the seminar and its mission. The term "global" was used not only in its territorial sense but also in its sense of comprehensiveness when applied to the concept of literacy and professional competence.

The director of this International Literacy Year seminar, Dr. Victor V. Onushkin, stated that the objectives were to examine: the modern problem and definition of illiteracy; the causes of professional illiteracy; measures to eliminate them and to develop recommendations for further research. The theme for the presentations and discussions was directed to these objectives as was the draft statement of recommendations from the seminar. Observations made in this paper were partially derived from some preliminary written materials, but were primarily

summarized from notes taken at the seminar.

The first two papers in the seminar were given by an agricultural economist and a sociologist. These keynoters challenged the participants to move beyond the traditional boundaries of thinking about literacy and adult education in their deliberations. The economist spoke of cyclic change and dynamics. He pointed out that it is not so much that people don't study but that as the world around them changes they may find they have studied the wrong things. Cycles vary in length from a few years to several centuries; technological cycles occur every 40-60 years. Cycles occur in many areas such as technology, ecology, ideology, politics, personal relations, and sexual relations. They have a wave-like character with a lag in movement and then swift explosive change. When cycles in several areas overlap and reinforce each other there comes a "storm of innovation." Currently the third wave in production and science and ecology and levels of human relations has a global nature. In the USSR today there is simultaneously "a) shift to market economy with the appearance of a great number of jobless people who will have to adjust to the new activity conditions; b) the modification of industrial and agricultural production, and the war industry conversion; c) the introduction of computers into all spheres of life; d) the widening of international contacts e) creation of a juridical state; f) renaissance of minor people's national cultures." [Staff] " Persons not ready to accept new ideas in such a changing environment are

professionally incompetent and can be dangerous," the economist claimed.

The sociologist continued in the same vein urging that literacy be considered in a wider aspect than the traditional one."Political and sociological illiteracy is not less important in the natural scientist than in the behavioral scientist having to deal in the modern world," he stated. Competence and professionalism "involve the skill to master knowledge and fulfill one's function in the field of work" locally, nationally and internationally, including its moral and ethical aspects. A true professional "has the morals to fulfill work in the best way modern knowledge allows." The algorithm of education itself must be changed to accomplish this.

The next session of the seminar was taken up with papers and discussions of the definitions of literacy, functional literacy and professional incompetence. Additional materials in the form of abstracts of papers written by staff members of the Research Institute and others from the USSR in preparation for the seminar were shared with participants. These included the well-known UNESCO and other current definitions of literacy and functional literacy. Major themes that emerged during the presentations and discussions were:

1. The implication that in practice goals for functional literacy have been limited to vocational/technical skills including reading, writing and calculating but in modern society these need to be broadened. Terms and phrases used to describe the added dimension were "social qualification," "social

functions of man in everyday life, planet earth, humanistic, development of personality," "social orientation of personality."

2. Calls for a move from a "monofunctional to a polyfunctional" model of education which combines general education, professional education and cultural training which takes into account the "entire spectrum of vital human interest" and is oriented to individual choice and self-regulation as an end in itself. [Lesokhina,Shadrina, Orlova]

3. The thesis that each individual participates in a mosaic of functions/roles related to which one must become literate such as worker, consumer, family member, health provider, culture transmitter. One can be literate in some functions and not others. Functions tend to be specific to a given culture and socioeconomic situation. There is no hierarchical order to these roles. Each individual will have a unique set of priorities among them.

4. The theme that illiteracy occurs at higher levels of cognitive achievement than have been traditionally considered under the definition of that term. Thus the term professional incompetence was used. The Chernobyl disaster was cited as an example.

Semantic differences precluded any consensus on definitions of either functional illiteracy or professional incompetence so there was no attempt to cite statistics. However it was agreed that the problem was monumental, and that the more broadly the terms were defined the worse it became. The terms specialist and expert were also used. However there was a consistent theme that

in addition to superior cognitive and technical knowledge, the competence of professionals is a "multifactor phenomenon. includes their values, motivation, and awareness of self and the surrounding world; their relations with colleagues, their cultural background and ability to increase their creativity." [T.G. Brazhe]

Lack of competence in any of these dimensions produces a form of illiteracy that increases the risk factors in modern civilization. It increases the risk for those who puts their trust or fate in the hands of such a professional, be it doctor, lawyer, teacher or engineer or master electrician.

In summary, moving from negative to positive terminology, the traditional definitions of literacy were stretched both vertically and horizontally. There was a consideration of the importance of a wider band of roles and functions that require literacy and a call for attention to competence at a higher level of cognitive functioning where people were traditionally considered to be highly literate.

The ideas discussed at the seminar might be combined into a model for further research in literacy and professional competence. Ignoring specific definitions in a first approximation, there appears to be a continuum of levels of literacy from the acquisition of basic skills to functional literacy to vocational/professional competence, to specialist/expert. Borrowing from Bloom and Krathwohl's "Taxonomy of Educational Objectives: Cognitive Domain" to describe this hierarchy in broader terms, one would move from

knowledge to comprehension to application, to analysis to synthesis. If the illiteracy-expert continuum is set against this hierarchy** it would further define its points. (There are similar hierarchies for the affective and psycho-motor domains.) See Chart 1.

Decisions as to where to place definitions of literacy, functional literacy, professional and expert on this continuum require further research. However the use of UNESCO definitions suggests that the level of elementary LITERACY would fall after the acquisition of basic skills and after some knowledge was achieved. Whether or not this line should be moved to or beyond the comprehension level is open to discussion. The line in the model for FUNCTIONAL LITERACY is positioned after progress is made into the application level of learning to reflect "skills and knowledges necessary for a full right and effective participating....for benefit of their progress and own personal development." (UNESCO) This is minimal as some ability to analyze may be required. The level of PROFESSIONAL COMPETENCE is achieved only after the ability to analyze is mastered and synthesizing capabilities are being developed. Usually there is some type of accreditation that certifies that a minimum competency for professional classification has been achieved. This might be a

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** The reader is cautioned at this point that while this hierarchy is in the cognitive domain, there is no inference that there is necessarily any correlation between one's position on this hierarchy and one's ability to contribute to society.

medical board examination for doctors, law boards for lawyers or it might be a degree or certificate in a specific subject area. The term "professional" is used differently in various cultures. Conceptually however for the purposes of this for continuum, a master craftsman could be considered a professional for the function of worker. The move from apprentice to journeyman to master could be interpreted as positions along the continuum from functional literacy to professional competence.

Conceptually one can move across this continuum for any function/role. These might include humane (moral/ethical) family, citizen, worker, consumer, health, art/music. The experiences required to grow are qualitatively different in the moral and in the technical realm. The specifics of these functions would be cuturally determined, but they would have many commonalities across cultures. For example, take the function of health maintenance. One moves from simple application of home nursing skills for cuts and bruises and colds, to the functional literacy level with continued learning to become accredited as a home aide or nurse aide when one might be classified as "pre-professional" or "semi-professional." The acquisition of the ability to analyze and synthesize would move one along to the "professional" level of doctor or nurse, while even further experience, education or learning might qualify one as an "expert" or "specialist," the other end of our continuum. One can move in the citizen function from sufficient knowledge of the system to vote to the role of senator, prime minister or president.

Traditionally the move from illiteracy to literacy has been

viewed as an irreversible condition. The move from literacy to illiteracy has not received the same attention. The notion of professional incompetence however presupposes a prior achievement of the status of "professional". What is the cause of this backward movement?

The explanation requires the application of another dimension to the research model. Superimpose the model described in Chart I on a shifting societal base where the changing cycles and dynamics described by the seminar keynoter are the reality. These changes shift the labeled positions on the hierarchy of learning to the right [as shown in Chart 2] so that the former requirements for professional competency shown by the line of dashes are no longer sufficient to maintain current competency levels. In cases of drastic change one might move back to the level of functional literacy. Thus a person can become professionally incompetent by standing still. The measure of this is indicated in the Chart 2 by the slashed areas containing the shaded arrows.

Awareness of and understanding of these shifts can be provided by adult education. The degree of incompetence will vary depending on the function being considered and the nature of the changes in society. A computer engineer will become professionally incompetent faster than a professor of Shakespeare or Pushkin. A citizen literate and competent in a centrally controlled political system may become incompetent or functionally illiterate in a democratic system. The more shifts that occur at one time, the greater is the risk of incompetence

in modern civilization.

The point in the model where researchers will focus at any one time will depend on what is happening in their society. The British paper at the seminar focused on the Basic Skill area (1) in Chart 2 due to concerns created by large groups of immigrants. The Belgian paper focused on the area of functional literacy (2) in Chart 2 due to large unemployment and new technologies. The Soviet experience of a rapidly changing political, economic and technological environment tended to put a focus at the point of professional competence (3) in Chart 2. The United States is also concerned with functional literacy (2) of their future labor force and professional competence with the shift from the industrial to the information age.

The seminar participants, mostly adult educator/researchers, were unanimous in the belief that many solutions to overcoming the problems discussed lay within the perogative of adult education. Time ran out for specific discussions of methodology and measurement. Some of the themes already mentioned apply to the training of adult educators. Educators were cautioned to use positive terms in setting goals and motivating adults to move forward toward increased literacy and professional competence rather than toward the elimination of illiteracy or incompetence. There was a reminder that despite the fact that education takes place in a social and economic medium, most continue to seek optimums not minimums. Integrity, adaptability and ability to forecast the changing world around us are essential for success in these continuing education endeavors to enhance literacy and

professional competence and thus reduce risk factors in our modern civilization.

There was a strong expression of need for research throughout the working statements prepared for the seminar, the presentations and discussion. The following are summarized from "The Recommendations." Some priority areas for research are:

1. The global character of research and its connection with socioeconomic, scientific-technological and sociocultural consequences for the development of modern civilization.
2. The development of a concept to determine the social requirements related to the level of a person's literacy at the modern stage of social development.
3. The analysis of adult functional illiteracy and the elaboration of practical ways for its elimination that consider literacy lost as well as lack of acquisition of new societal requirements.
4. New approaches to the problem of professionalism and the organization of continuous adult education and its role in eliminating professional incompetence and functional illiteracy.
5. The broadening of training of professionals in adult education in the wider context of solving global problems.
6. The study of conditions for generating the need of adults in development of creative potential and preparedness for constant growth and development, both professional and cultural.

It was concluded there should be ample opportunities for growth of teachers and other professional persons in the adult education system by: developing policies to increase the

efficiency of all systems of education; improving dissemination of the latest information and statistics; and providing interdisciplinary and interinstitutional links for coordination worldwide in order to eliminate functional illiteracy and professional incompetence.

This first seminar linking literacy and professional competency was related to International Literacy Year as undertaken under the aegis of UNESCO. The participants proposed that the recommendations, including specific intents under each one, be forwarded to UNESCO and its regional organizations for implementation through international cooperation.

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CHART 1.

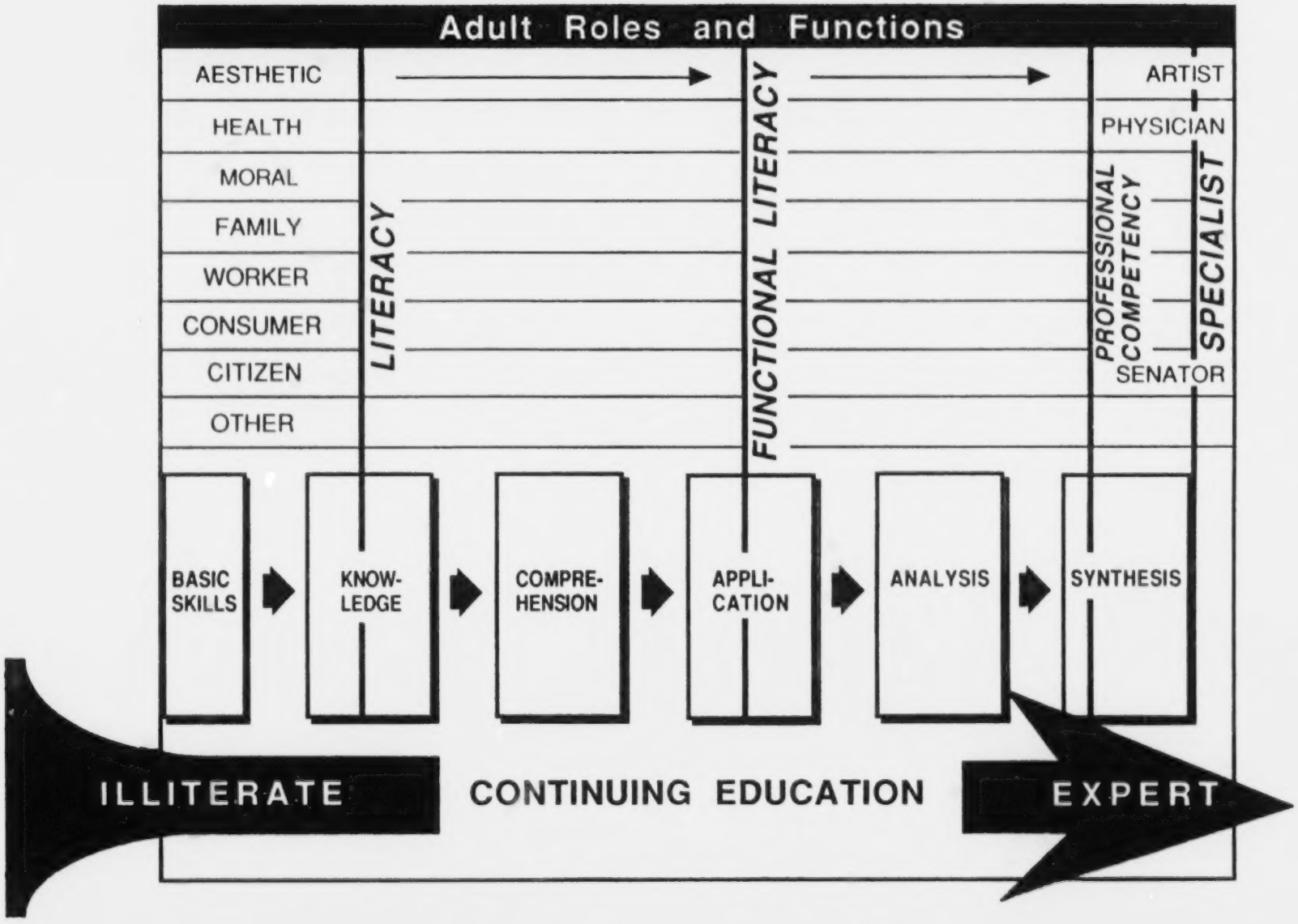
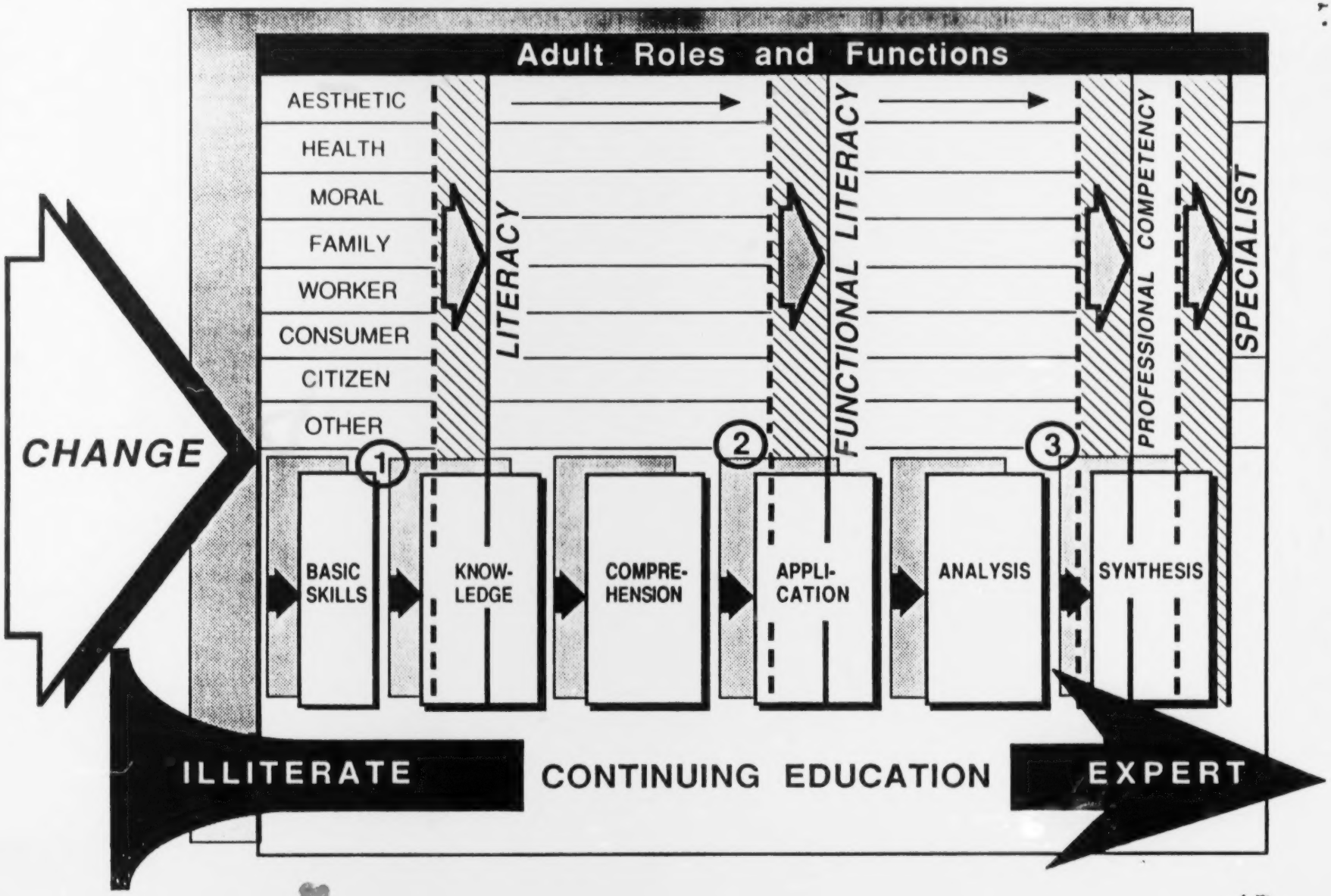

Adult Roles and Functions
AESTHETIC
HEALTH
MORAL
FAMILY
WORKER
CONSUMER
CITIZEN
OTHER
LITERACY
FUNCTIONAL LITERACY
PROFESSIONAL COMPETENCY
SPECIALIST
ARTIST
PHYSICIAN
SENATOR
BASIC SKILLS
KNOW-LEDGE
COMPRE-HENSION
APPLI-CATION
ANALYSIS
SYNTHESIS
ILLITERATE
CONTINUING EDUCATION
EXPERT

CHART 2.


Adult Roles and Functions
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FAMILY
WORKER
CONSUMER
CITIZEN
OTHER
LITERACY
FUNCTIONAL LITERACY
PROFESSIONAL COMPETENCY
SPECIALIST
CHANGE
1
2
3
BASIC SKILLS
KNOW-LEDGE
COMPRE-HENSION
APPLI-CATION
ANALYSIS
SYNTHESIS
ILLITERATE
CONTINUING EDUCATION
EXPERT